Chemistry Practice Test Answer Key

Qatar Senior School Certificate 2009

هيئة التقييم
EVALUATION INSTITUTE

Selected Response Answer Key:

Item	Answer
1	D
2	D
3	A
4	D
5	C
6	D
7	B
8	C
9	D
10	C
11	C

Answer to question 12:

mass of N = 4.375 g

$$\text{moles of N} = \frac{4.375\ \text{g}}{14.007\ \text{g/mol}} = 0.3123\ \text{mol}$$

mass of H = 0.625 g

$$\text{moles of H} = \frac{0.625\ \text{g}}{1.0079\ \text{g/mol}} = 0.620\ \text{mol}$$

mole ratio of N : H = 0.3123 : 0.620 = 1 : 2

empirical formula = NH_2

empirical formula mass = $1 \times 14.007\ \text{g} + 2 \times 1.0079 = 16.023\ \text{g}$

$$\frac{\text{molecular formula mass}}{\text{empirical formula mass}} = \frac{32.0\ \text{g}}{16.023\ \text{g}} = 2$$

molecular formula = N_2H_4

Answer to question 13:

A. To test for oxygen in the laboratory, place a glowing splint in the vicinity and it will burst into flame if oxygen is present.

B. Any two of the following properties:

- odorless, colorless gas
- reactive with metals to form oxides
- will form double bonds and negative 2 ions

Answer to question 14:

The empirical formula is P_2O_5 in both cases since it is the smallest whole number ratio of atoms.